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OIL AND GERMAN STRATEGY

DEPARTMENT OF STATE
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The German armies need not be hampered by lack of oil during 1942: their reserves are adequate and increased production is expected.

Caucasian or Middle Eastern oil would be welcome to Germany for nonmilitary use, but the desire to deny this oil to the Allies, who must have it, may be a stronger influence on current German strategy than the alleged shortage.

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H.B. Hitchcock
By E.G. Bunker
Date Jan. 9, 1947

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OIL AND GERMAN STRATEGY

Available estimates of production, consumption, and stocks of petroleum in German-controlled Europe vary widely. But all except the most extreme calculations point to a single conclusion: that German military operations need be hampered little, if at all, by lack of oil supplies during 1942.

Total production of crude and synthetic petroleum and motor-fuel substitutes in Axis Europe in 1941 are generally believed to have been in the vicinity of 15,000,000 metric tons. Consumption, before the beginning of the Russian campaign, was roughly the same—perhaps a little higher. Stocks are thought to have been equal to a third or a half of a year's requirements.

The Russian campaign brought about a sharp increase in military needs which was not, presumably, offset completely by tightening further the restrictions on nonmilitary uses. During the last half of 1941, therefore, Germany was forced to draw upon reserve stocks—heavily according to some estimates, lightly according to others.

During the winter months it is clear that consumption has been less than at the height of the campaign. In the meantime, according to the most careful study of the German oil position yet prepared, output

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of petroleum products has increased significantly as compared with last summer, a trend which is expected to continue through 1942. By the end of the year, according to this estimate, current output will be sufficient to support a rate of consumption as high as that reached during the second half of 1941, and stocks will not have been exhausted (see diagram between pages 4 and 5).

The situation, admittedly, may not develop so favorably to German plans; but even if, for example, stocks are exhausted by the middle of the year, before production has attained the anticipated level, there is the possibility of cutting nonmilitary consumption still further. The consequences of starving this category, which uses not less than a third of total oil supplies, cannot be estimated precisely, but for short periods they would assuredly be less serious than those of denying needed oil to the armed forces. Nonmilitary consumption should thus be regarded as a special reserve available for use in severe emergencies.

The present and probable future adequacy of gross petroleum supplies for military needs does not appear to be compromised by a crippling shortage of any special type of lubricant or fuel. The latest analyses show that German pursuit planes were operating on gasoline of 100 octane or above, the equal of any available to the R. A. F. and higher than the Germans had previously had. Rumanian refineries generally are not equipped to produce the high-grade lubricants required for winter use; but Greater Germany and the other countries of Europe are believed to possess enough modern refining capacity to produce sufficient quantities of general and special

purpose lubricating oils as good as those available anywhere. It is reported, however, that conditions in Russia are at times so severe that mechanical equipment of all kinds is virtually immobilized, despite the use of special lubricants and special precautionary measures.

Economic Effects of Petroleum Shortage

Despite German ability to meet the oil needs of her army, the shortage of natural petroleum constitutes a serious economic problem. Germany is able to maintain her war machine only by limiting nonmilitary consumption drastically and by diverting resources and manpower to the expansion of production. Both old and new oil fields in Eastern Europe are being exploited more intensively. The production of synthetic petroleum is being expanded, although the need for large quantities of coal and lignite has been among the factors accentuating labor shortage at the mines. The use of potatoes, sugar, and wine to produce alcohol for motor fuel competes with both human and animal consumption, and the substitution of producer-gas equipment for gasoline and Diesel engines throughout Europe imposes an added burden on industry.

Nonmilitary consumption of petroleum products in Axis Europe is barely a third of the pre-war rate. This situation cannot, presumably, be permitted to continue indefinitely. Moreover, if the Russian campaign is to pay immediate dividends, fuel and lubricants will be required in the western Ukraine, where tractor cultivation is an almost universal practice; and development of other productive facilities

in this area may also demand oil. A rough estimate suggests that 1,000,000 tons of petroleum products would be required annually by Germany to develop the full agricultural potentialities of the Ukraine. The pre-war use of petroleum for all purposes in occupied Russia as a whole appears to have been not less than five or six million tons a year.

Notwithstanding its present adequacy for military operations, the German economy remains oil hungry. If the war could be brought quickly and successfully to an end, satisfaction of this need could be postponed, but if Germany expects a war of long duration, the compulsion to conquest of additional oil supply remains.

Potential Supplies in Caucasus and the Middle East[1]

The oil fields of the Caucasus and the Middle East are rich and temptingly near to German reach.

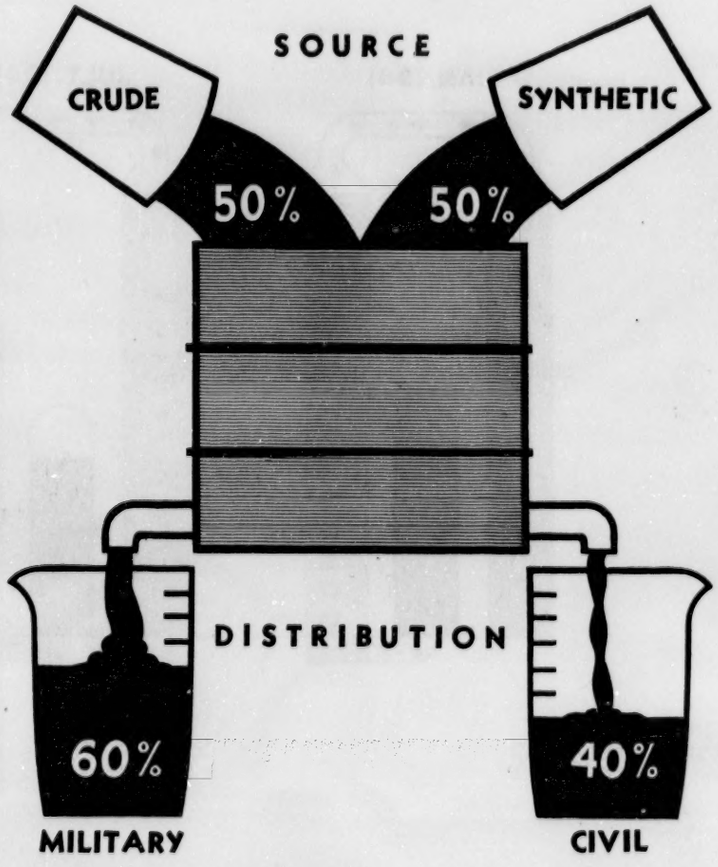
The Caucasus has production and refining capacity exceeding 20,000,000 tons a year. Of this, 5,000,000 tons are in the Maikop-Grozny area within easy access of Rostov; the rest, in the Baku district, is protected by the Caucasus Mountains. Refining facilities include modern units for the production of high-octane gasoline and superior lubricants.

Egypt, Iraq, Iran, Bahrein Island, and Saudi Arabia produced 16,000,000 metric tons of crude oil in 1940 and have a refining capacity of 20,000,000 tons a year. The Iranian refinery at Abadan has an aviation gasoline capacity of 175,000 tons per year (which the Allies may increase substantially during the next year or two). All together the areas which

[1] See map inside back cover.

PETROLEUM POSITION OF AXIS EUROPE

(Last half 1941)



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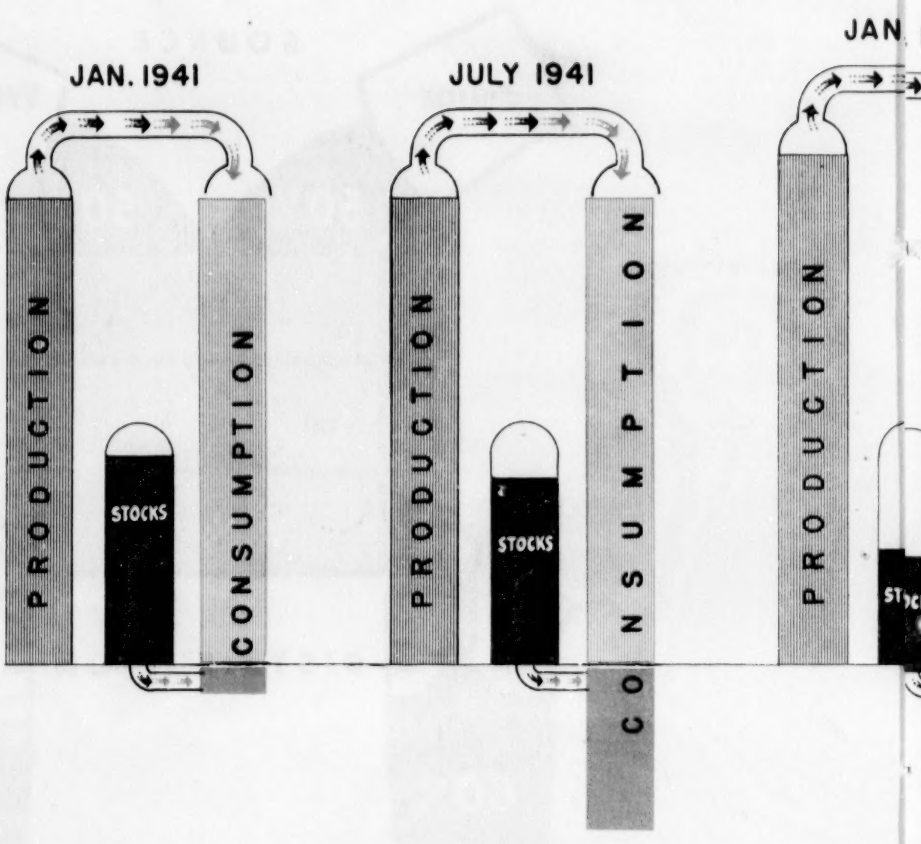

WITHDRAWAL
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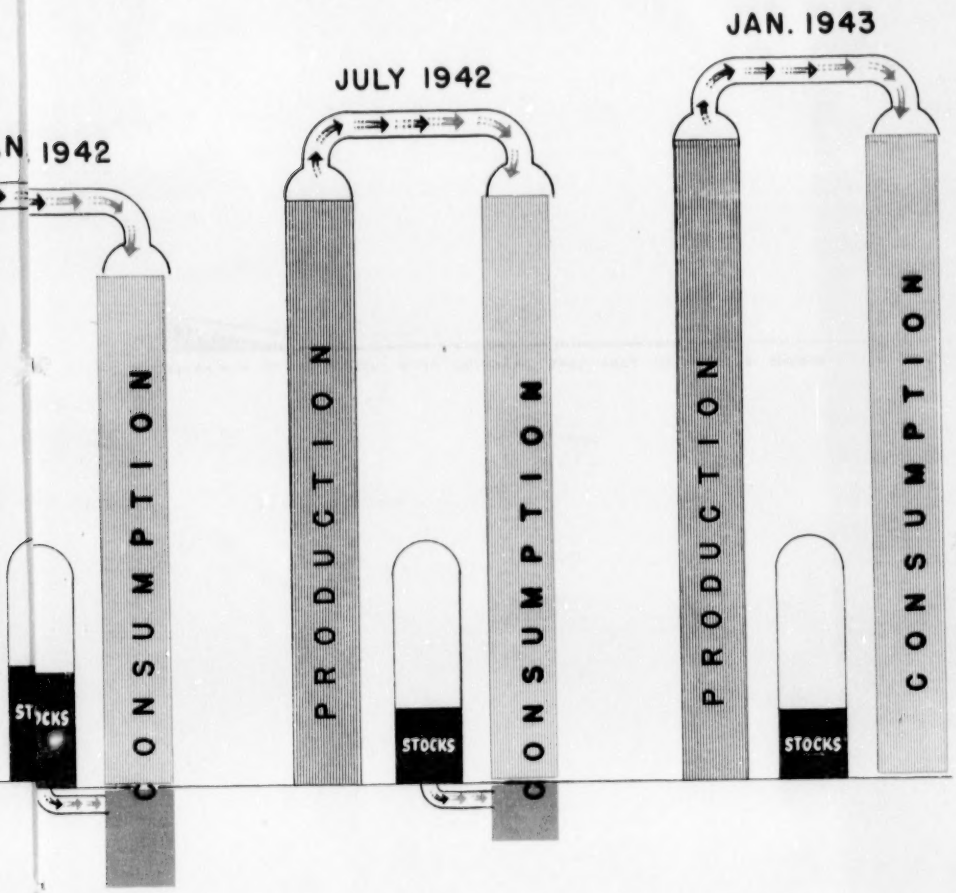
NNUAL RATES (MONTHLY AVERAGE TIMES 12)



may be subject to Nazi conquest are capable of producing at least 35,000,000 tons of crude oil a year and possess refinery capacity for a still larger amount.

The immediate advantage to Germany of conquering the Caucasian and Middle Eastern oil areas would depend mainly upon the success of Allied demolition activities and the rapidity with which the transport difficulties could be surmounted.

The successful demolition of oil wells and refineries requires extensive advance preparations. These were made and executed in the Netherlands East Indies. If similar practice were followed in the path of a German advance to the east, the immediate advantage to the Axis would be much reduced. Experts agree that, while German oil-well drilling and pumping equipment is perhaps inferior to the best, it is technically capable of handling most of the problems likely to be met. The supplies of such equipment, and of trained operators, are limited, however. Thus, while there is no doubt that Germany could in a matter of weeks recover some oil from fields rendered wholly unproductive, the restoration of a large number of wells to full productivity would take years. The same would apply to refining facilities.

Transport difficulties would also have to be met. Augmentation of European supplies of crude petroleum from the Caucasus would require control of the Black Sea, plenty of tankers, and perhaps expansion of transport facilities through Bulgaria, Rumania, and Central Europe. If, however, refining as well as crude oil production facilities were taken in the comparatively accessible Maikop-Grozny area of the North Caucasus, transport direct to German armies of occupation in southern Russia would be-

come feasible. A pipe line running northwest through Rostov, which is reported to reach a point near Kiev, would speed direct distribution to that area. It might immediately ease both the petroleum shortage and the strain on transport in Western Europe. But without local refineries, Caucasian oil for these armies would have to travel the long route to Rumanian refineries and back to Russian points. The destruction of Caucasian refining capacity would be serious only for transport reasons, since there is a considerable excess of refineries in Europe.

Control of the Eastern Mediterranean and of the Suez Canal would be required if significant quantities of oil are to be transported to Europe from Iraq, Iran, Bahrein Island, and Saudi Arabia; the alternative would be a long and difficult pipe line construction job. It is probable, however, that military operations which resulted in the conquest of Near and Middle Eastern oil would establish control of tanker routes to all Mediterranean ports.

Significance of Caucasian and Middle Eastern Oil for the Allies

The occupation of the North Caucasian plain would not only put Germany in control of a fourth of the oil in the Caucasus, but it would effectively cut off the bulk of the Russian armies from the oil beyond the mountains to the southward. Russia has other oil areas, but their output is not sufficient to prevent a serious impairment to the effectiveness of the Russian army. If Germany acquired the North Caucasus, Russia would perhaps be able to obtain only such small amounts of Baku oil as could be carried

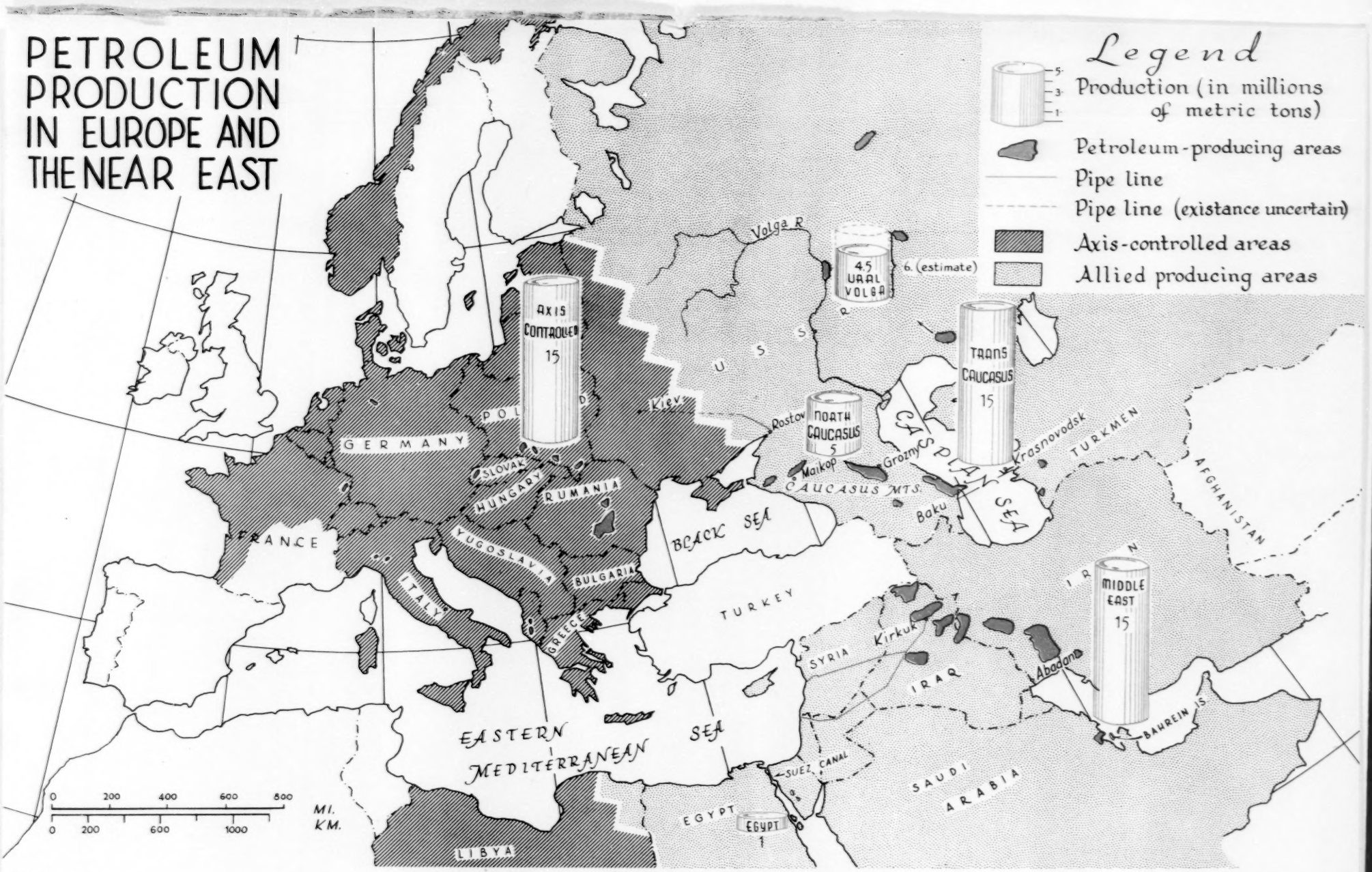
across the Caspian and over the circuitous railway route from Krasnovodsk through the Turkmen Republic—a route which might also be required to carry military goods brought in through Afghanistan. If the Russian armies could hold the line of the Volga River, they would have available the crude output of the Ural-Volga region plus the minor quantities produced in Siberia. In 1940 these supplies amounted all together to 4,500,000 tons. For 1942 optimistic forecasts place the figure as high as 6,000,000 tons of crude. Unfortunately, however, the refining capacity in this area is sadly deficient. In 1940 it amounted at most to 3,000,000 tons a year. There is no reason to expect that a substantial increase has yet been made, especially in the light of technical difficulties associated with the presence of salt and sulphur in the crude. Russian requests for additional equipment are now under consideration by the United States Government. There is no practical possibility, however, of bringing refining capacity up to the possible level of crude output for 1942. As against this situation, nonmilitary consumption in 1940 in the area in question is roughly estimated at 7,500,000 tons. Although this is undoubtedly capable of drastic restriction under war conditions, it is clear that the satisfaction of any substantial military requirements would leave unoccupied Russia almost devoid of petroleum for agriculture, industry, and transport.

German conquest of the Near and Middle Eastern fields would have a further crippling effect on Allied operations in important theaters of war. Such conquest would probably be preceded by driving the British out of the Levant, Egypt, and Libya, but

even if it were not, the loss of readily available oil supplies would swiftly cripple Allied operations against the Axis in Africa and the Middle East. Furthermore, these oil resources are almost all that remain to the Allies in the entire Eastern Hemisphere. Operations of Allied naval and merchant vessels and aircraft west of Australia would become extremely difficult. Allied tanker tonnage, which would be needed to bring alternative supplies from distant producing areas, is critically limited. Loss of the aviation fuel capacity at Abadan would be additionally serious because the total available supply is becoming short.

In combination with Japanese successes in the East Indies and intensified German attacks on shipping, the denial to the United Nations of Middle Eastern oil would go a long way toward assuring Axis control of the Mediterranean and the Indian Ocean. Denial of Caucasian oil to the Russian armies would seriously impair the strength of their resistance, as already noted. Owing to the desirability of striking a decisive blow at the Allies while they are still weak, it seems likely that these considerations are more greatly emphasized in German strategic deliberations than the need for eventual expansion of European oil supplies. While attention in Allied countries is focussed on Germany's shortage, German strategists may be studying ways to deprive the Allies of their strategically situated oil.

U. S. GOVERNMENT PRINTING OFFICE: 1942



MAP NO. 321

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